Abstract

A global and local statistics controlled noise reduction system in which the video image noise reduction processing is effectively adaptive to both image local structure and global noise level. A noise estimation method provides reliable global noise statistics to the noise reduction system. The noise reduction system dynamically/adaptively configures a local filter for processing each image pixel, and processes the pixel with that local filter. The filtering process of the noise reduction system is controlled by both global and local image statistics that are also computed by the system.